

## CLAIMS:

1. A lens system for use in manufacturing CRT screens, the lens system comprising:

- a first lens having a first refractive index and
- a second lens having a second refractive index, the second refractive index

5 being higher than the refractive index of air and lower than the first refractive index, wherein the first and the second lens each have an outer surface and a generally aspherical critical refractive surface, said critical refractive surfaces having complementary shapes and being arranged in direct contact with each other such that a refractive interface for the lens system is formed between the first and the second lens.

10

2. The lens system according to claim 1, in which the outer surface of the first lens is flat.

3. The lens system according to any one of the preceding claims, in which the  
15 outer surface of the second lens is flat.

4. The lens system according to any one of the preceding claims, in which the first lens is made from a solid material, and the second lens is made from a liquid material, the first lens being submerged in said liquid material and the liquid material being enclosed  
20 in a transparent container.

5. The lens system according to any one of the claims 1 to 3, in which both the first and the second lens are made from a solid material.

25 6. The lens system according to claim 5, in which the first lens is made from quartz and the second lens is made from glass.

7. A method of manufacturing a screen for a CRT using the lens system as claimed in any one of the preceding claims